=> d his

(FILE 'HOME' ENTERED AT 13:21:31 ON 10 JUN 2006)

FILE 'REGISTRY' ENTERED AT 13:21:39 ON 10 JUN 2006 STRUCTURE UPLOADED

L1

L2STRUCTURE UPLOADED

L31 S L1 OR L2

L422 S L3 FULL

FILE 'CAPLUS' ENTERED AT 13:22:54 ON 10 JUN 2006

L5 3 S L4

=> d que 15 stat

L1STR

Structure attributes must be viewed using STN Express query preparation. STR

G1 [@1],[@2]

G1 [@1], [@2]

Structure attributes must be viewed using STN Express query preparation.

22 SEA FILE=REGISTRY SSS FUL L1 OR L2 L4

L5 3 SEA FILE=CAPLUS ABB=ON PLU=ON L4 => d 1-3 bib abs hitstr

10/801,892 Page 3

```
L5
      ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
AN
      2006:166129 CAPLUS
DN
      144:263646
      High-capacity optical storage media
TI
      Bacher, Jean-Pierre; Baudin, Gisele; Wendeborn, Frederique; Adam,
IN
       Jean-Marie; Lehmann, Urs; Birbaum, Jean-Luc
      Ciba Specialty Chemicals Holding Inc., Switz.
PA
SO
      PCT Int. Appl., 120 pp.
      CODEN: PIXXD2
דת
      Patent
LA
      English
FAN.CNT 1
      PATENT NO.
                               KIND
                                        DATE
                                                       APPLICATION NO.
                                                                                     DATE
       ------
                                        -----
                                                        -----
PΙ
      WO 2006018352
                                A1
                                        20060223
                                                      WO 2005-EP53215
                                                                                     20050706
           W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
                CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,
                SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
                ZA, ZM, ZW
           RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
                CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
                GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
PRAI EP 2004-103931
                                        20040816
                                Α
      EP 2004-105558
                                Α
                                        20041105
      EP 2005-100720
                                Α
                                        20050202
GT
```

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention accordingly relates to an optical recording medium comprises a substrate, a reflecting layer and a recording layer, wherein the recording layer comprises a compound of formula I or a mesomeric or tautomeric form thereof (M1 is a metal cation in the oxidation state +3, a hydroxy or halogeno metal group wherein the metal is in the oxidation state +4, or an oxo metal group wherein the metal is in the oxidation state +5; III and IV are each independently of the other V, VI or VII; VIII is IX, X, XI, XII, XIII or XIV; XV is XVI or C2-8 heteroaryl unsubstituted or monoor poly-substituted by R10-13; Q1 = N or CR18; $\overline{\text{Q2}}$ = N or CR19; Q3, Q5 and Q7 are each independently of the other CR20R21,O, S or NR22; Q4 = CR16 or N and Q6 is CR17 or N; and R2 and/or R6 = O, S or NR33; R1,3-5,7-13,15-19 = H, halogen OR23, SR23, NR22R24, etc.; R14 = C1-12 alkyl, C3-12 cycloalkyl, etc.; R20,21 = C1-12 alkyl, C2-12 alkenyl, etc.; R22 = H, C1-4 alkyl, C2-4 alkenyl, etc.' R24,26,27 = H, C1-6 alkyl, C2-6 alkenyl,etc.; R33 = COR24, COR26R27, CN, etc.). Please see the disclosure for the other substituents which are less relevant. The compds. of formula I are novel and also claimed, as well as the compound of formula II, or a meso-mer or tautomer thereof (R38 = halogen, CF3, NO2, CN, COR22, COOR23, SO3R23, NCO or SCN; G1, G 2, M1, R1, R2, R4, R5, R6, R8, R22 and R23 are as defined in formula I; M2m+ = cation with m pos. charges; and m = integer 1, 2 or 3). The optical recording media are remarkably suitable for DVD+R (658 nm), especially at high recording speeds. TT 877313-08-1

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(high-capacity optical storage media containing)

RN 877313-08-1 CAPLUS CN INDEX NAME NOT YET ASSIGNED

CM 1

CRN 794486-94-5 CMF C30 H34 N10

PAGE 1-A

$$\begin{array}{c} \text{Me} \\ \text{N} \\ \text{N} \\ \text{N} \\ \text{N} \\ \text{N} \\ \text{Me} \end{array}$$

PAGE 1-B

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 776325-16-7

CMF C18 H8 Co N8 O8 S2

CCI CCS

IT 877178-57-9P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent) (preparation of high-capacity optical storage media)

877178-57-9 CAPLUS RNCN

1H-Imidazolium, 2,2'-[1,4-phenylenebis(methyleneimino-4,1-phenyleneazo)]bis[1,3-dimethyl-, bis(methyl sulfate) (9CI) (CA INDEX NAME)

CM 1

CRN 794486-94-5 CMF C30 H34 N10

PAGE 1-A

$$\begin{array}{c} \text{Me} \\ \\ \text{N} \\ \text{N} \\ \text{N} \\ \text{N} \\ \text{Me} \end{array}$$

PAGE 1-B

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0 CMF C H3 O4 S

Me-0-SO3-

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L5
     ANSWER 2 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
     2005:441245 CAPLUS
AN
DN
     144:234598
     Cationic dimeric dyes
TТ
ΑU
     Anon.
CS
     USA
so
     IP.com Journal (2004), 4(10), 28 (No. IPCOM000031281D), 21 Sep 2004
     CODEN: IJPOBX; ISSN: 1533-0001
PΒ
     IP.com, Inc.
DT
     Journal; Patent
LΑ
     English
     PATENT NO.
                                DATE
                         KIND
                                            APPLICATION NO.
                                                                   DATE
     IP 31281D
                                20040921
PRAI IP 2004-31281D 20040921
     Bispyridinium conjugated azomethine dyes for hair are prepared and
     formulations containing them are described. As an example,
     N-methyl-N-phenylhydrazine is condensed with 4-pyridinecarboxaldehyde and
     the product is then treated with 4,4'-bis(chloromethyl)biphenyl to provide
     a brown dye.
IT
    765918-45-4P
     RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or
```

(brown dye; preparation of cationic dimeric dyes for hair) 765918-45-4 CAPLUS RN Pyridinium, 1,1'-[[1,1'-biphenyl]-4,4'-diylbis(methylene)]bis[4-CN

[(methylphenylhydrazono)methyl]-, dichloride (9CI) (CA INDEX NAME)

engineered material use); PREP (Preparation); RACT (Reactant or reagent);

PAGE 1-A

$$\begin{array}{c} \text{Ph} \\ \\ \text{Me}-\text{N}-\text{N} \end{array} = \text{CH} \\ \\ \begin{array}{c} \text{CH} \\ \end{array} = \begin{array}{c} \text{CH} \\ \end{array}$$

●2 Cl-

PAGE 1-B

USES (Uses)

ΙT 765918-49-8P 765918-54-5P 765918-58-9P 765918-60-3P 876109-18-1P 876109-20-5P RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (dye; preparation of cationic dimeric dyes for hair) RN765918-49-8 CAPLUS 1H-Imidazolium, 2,2'-[1,4-phenylenebis(methyleneimino-4,1phenyleneazo)]bis[1,3-dimethyl-, dichloride (9CI) (CA INDEX NAME)

PAGE 1-A

●2 Cl-

PAGE 1-B

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE 765918-54-5 CAPLUS

1H-Imidazolium, 2,2'-[1,2-phenylenebis(methyleneimino-4,1-phenyleneazo)]bis[1,3-dimethyl-, dichloride (9CI) (CA INDEX NAME)

●2 Cl-

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

765918-58-9 CAPLUS
Pyridinium, 1,1'-[1,3-phenylenebis(methylene)]bis[4-[1(methylphenylhydrazono)ethyl]-, dibromide (9CI) (CA INDEX NAME) CN

●2 Br-

RN 765918-60-3 CAPLUS
CN Pyridinium, 1,1'-[1,4-phenylenebis(methylene)]bis[4-[1(methylphenylhydrazono)ethyl]-, dichloride (9CI) (CA INDEX NAME)

$$\begin{array}{c} Ph \\ | \\ Me-N-N \\ | \\ Me-C \\ \end{array}$$

●2 Cl-

RN 876109-18-1 CAPLUS
CN Pyridinium, 1,1'-[[1,1'-biphenyl]-4,4'-diylbis(methylene)]bis[4[(methylphenylhydrazono)methyl]-, diacetate (9CI) (CA INDEX NAME)

CM 1

CRN 794486-92-3 CMF C40 H38 N6

PAGE 1-A

Ph

Me-N-N-CH

CH-N-

PAGE 1-B

2 CM

CRN 71-50-1 CMF C2 H3 O2

RN

876109-20-5 CAPLUS
Pyridinium, 1,1'-[1,4-phenylenebis(methylene)]bis[4-CN[(methylphenylhydrazono)methyl]-, diacetate (9CI) (CA INDEX NAME)

CM1

CRN 794486-93-4 CMF C34 H34 N6

$$\begin{array}{c} \text{Ph} \\ | \\ \text{Me}-\text{N-N} \\ \text{CH} \\ \end{array} \begin{array}{c} \text{CH} \\ \text{N-N-Me} \\ \end{array}$$

CM

CRN 71-50-1 CMF C2 H3 O2

765918-47-6P 765918-52-3P 765918-56-7P 765918-62-5P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(orange dye; preparation of cationic dimeric dyes for hair)

765918-47-6 CAPLUS RN

Pyridinium, 1,1'-[1,4-phenylenebis(methylene)]bis[4-CN[(methylphenylhydrazono)methyl]-, dichloride (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Ph} \\ | \\ \text{Me}-\text{N-N} \\ \text{CH} \\ \end{array} \begin{array}{c} \text{CH} \\ \text{N-N-Me} \\ \end{array}$$

RN

CN

765918-52-3 CAPLUS
Pyridinium, 1,1'-[1,2-phenylenebis (methylene)]bis[4-[(methylphenylhydrazono)methyl]-, dichloride (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & \text{Ph} \\ & \mid \\ \text{CH} = \text{N-N-Me} \\ \\ \text{CH}_2 = \text{N+} \\ & \mid \\ \text{CH} = \text{N-N-Me} \\ \\ \\ \text{CH}_2 = \text{N+} \\ \end{array}$$

●2 Cl-

RN

765918-56-7 CAPLUS
Pyridinium, 1,1'-[1,3-phenylenebis(methylene)]bis[4-[(methylphenylhydrazono)methyl]-, dibromide (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} Ph & Ph \\ \hline Me-N-N=CH & CH=N-N-Me \\ \hline \\ N^+-CH_2-N-Me \\ \hline \end{array}$$

●2 Br~

RN765918-62-5 CAPLUS

Pyridinium, 1,1'-[1,2-phenylenebis(methylene)]bis[4-[1-CN(methylphenylhydrazono)ethyl]-, dichloride (9CI) (CA INDEX NAME)

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ANSWER 3 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
L5
      2004:801976 CAPLUS
AN
DN
      141:315835
ΤI
      Cationic dimeric dyes having aminoazomethine or azo groups
IN
      Eliu, Victor Paul; Frohling, Beate
PΑ
      Germany
SO
      U.S. Pat. Appl. Publ., 48 pp.
      CODEN: USXXCO
DT
      Patent
LA
      English
FAN.CNT 1
      PATENT NO.
                              KIND
                                      DATE
                                                    APPLICATION NO.
                                                                               DATE
      --------
                                                    -----
                                                                               -----
      US 2004187231
                              A1
                                      20040930
                                                    US 2004-801892
                                                                               20040316
      AU 2004222107
                               A1
                                      20040930
                                                    AU 2004-222107
                                                                               20040308
      WO 2004083312
                              A2
                                      20040930
                                                    WO 2004-EP50268
                                                                               20040308
          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
               CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
               LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
               NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
               TJ, TM,
                        TN,
                             TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
          RW: BW, GH,
                        GM,
                            KE, LS, MW,
                                           MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
               BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
               SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,
               TD, TG
     EP 1622686
                                                   EP 2004-718316
                                     20060208
                                                                               20040308
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     CN 1761448
                              Α
                                     20060419
                                                   CN 2004-80007278
                                                                               20040308
PRAI EP 2003-405185
                              Α
                                     20030318
     WO 2004-EP50268
                              Α
                                     20040308
os
     MARPAT 141:315835
GI
                Ι
                                                 II
                         x-
                                   {}^{\hat{}}R2
                   R<sup>2</sup>
```

AB The present invention relates to cationic dyes I and II, wherein A is Q1 or Q2, wherein R1 and R2 are each independently of the other unsubstituted or substituted C1-C14 alkyl or an aryl radical, R3 is hydrogen,

X-

 $0^2 =$

10/801,892 Page 13

unsubstituted or substituted C1-C14 alkyl, unsubstituted or substituted C1-C14 alkoxy, cyano or halo, R4 is hydrogen, unsubstituted or substituted C1-C14 alkyl or an aryl radical, and X- is an anion. Further, the present invention relates to compns. thereof, especially comprising other dyes, to processes for the preparation thereof and to the use thereof in the dyeing of organic material, such as paper and human hair with shades that are fast to washing, light, shampooing, and rubbing. A typical dye was manufactured by adding 16.5 g 4-pyridinealdehyde in 15 min to H2SO4 14, water 42, and $\alpha\text{-methylphenylhydrazine 16.2}$ at 293K with stirring, stirring 1 h, adjusting the pH to 2.2 with aqueous NaOH, adding 2.7 g NaCl at 333K, stirring 1 h, dissolving the 39.3 g resulting hydrazone in 200 g iso-PrOH, adding 27 g 4,4'-bis(chloromethyl)biphenyl, heating to 338K, and stirring 5 h. 765918-45-4P 765918-47-6P 765918-49-8P 765918-52-3P 765918-54-5P 765918-56-7P 765918-58-9P 765918-60-3P 765918-62-5P RL: COS (Cosmetic use); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses) (cationic dimeric dyes having aminoazomethine or azo groups for dyeing of paper and hair) 765918-45-4 CAPLUS
Pyridinium, 1,1'-[[1,1'-biphenyl]-4,4'-diylbis(methylene)]bis[4-

PAGE 1-A

$$\begin{array}{c} \text{Ph} \\ \text{Me}-\text{N}-\text{N} \end{array} \begin{array}{c} \text{CH} \\ \text{CH}_2 \end{array} \begin{array}{c} \text{CH} \\ \text{CH}_2 \end{array} \begin{array}{c} \text{CH} \end{array}$$

[(methylphenylhydrazono)methyl]-, dichloride (9CI) (CA INDEX NAME)

●2 C1-

PAGE 1-B

IT

RN CN

RN 765918-47-6 CAPLUS
CN Pyridinium, 1,1'-[1,4-phenylenebis(methylene)]bis[4[(methylphenylhydrazono)methyl]-, dichloride (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Ph} \\ | \\ \text{Me}-\text{N}-\text{N} \end{array} \subset \text{CH} \\ \\ \text{CH} = \begin{array}{c} \text{CH} \\ | \\ \text{N}-\text{N}-\text{Me} \end{array}$$

●2 Cl-

RN 765918-49-8 CAPLUS
CN 1H-Imidazolium, 2,2'-[1,4-phenylenebis(methyleneimino-4,1-phenyleneazo)]bis[1,3-dimethyl-, dichloride (9CI) (CA INDEX NAME)

PAGE 1-A

$$\begin{array}{c} \text{Me} \\ \\ \text{N} \\ \\ \text{N} \\ \\ \text{N} \\ \\ \text{Me} \end{array}$$

●2 C1-

PAGE 1-B

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE RN 765918-52-3 CAPLUS
CN Pyridinium, 1,1'-[1,2-phenylenebis(methylene)]bis[4-[(methylphenylhydrazono)methyl]-, dichloride (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & \text{Ph} \\ & \text{CH} \\ & \text{N-N-Me} \end{array}$$

$$\begin{array}{c|c} \text{CH}_2 \\ & \text{N-N-Me} \end{array}$$

$$\begin{array}{c|c} \text{CH}_2 \\ & \text{N-N-Me} \end{array}$$

●2 C1-

RN 765918-54-5 CAPLUS

1H-Imidazolium, 2,2'-[1,2-phenylenebis(methyleneimino-4,1-CN phenyleneazo)]bis[1,3-dimethyl-, dichloride (9CI) (CA INDEX NAME)

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN

765918-56-7 CAPLUS
Pyridinium, 1,1'-[1,3-phenylenebis(methylene)]bis[4-[(methylphenylhydrazono)methyl]-, dibromide (9CI) (CA INDEX NAME)

$$\begin{array}{c} Ph \\ | \\ Me-N-N = CH \\ \hline \\ N^{+} CH_{2} \\ \hline \\ CH_{2} \\ CH_{2} \\ \hline \\ CH_{2} \\ CH_{2$$

●2 Br-

CN Pyridinium, 1,1'-[1,3-phenylenebis(methylene)]bis[4-[1-(methylphenylhydrazono)ethyl]-, dibromide (9CI) (CA INDEX NAME)

Br-

RN

765918-60-3 CAPLUS
Pyridinium, 1,1'-[1,4-phenylenebis(methylene)]bis[4-[1-CN(methylphenylhydrazono)ethyl]-, dichloride (9CI) (CA INDEX NAME)

$$\begin{array}{c} Ph \\ | \\ N-N-Me \\ | \\ Me-C \\ \hline \\ N^{+}-CH_{2} \\ \end{array}$$

Cl-

RN

765918-62-5 CAPLUS
Pyridinium, 1,1'-[1,2-phenylenebis(methylene)]bis[4-[1-CN(methylphenylhydrazono)ethyl]-, dichloride (9CI) (CA INDEX NAME)

=> => d que	110	stat		
L6	27	SEA FILE=CAPLUS ABB=ON	PLU=ON	("ELIU VICTOR"/AU OR "ELIU
		VICTOR PAUL"/AU)		
L7	4	SEA FILE=CAPLUS ABB=ON	PLU=ON	"FROHLING BEATE"/AU
L8	28	SEA FILE=CAPLUS ABB=ON	PLU=ON	L6 OR L7
L9	11	SEA FILE=CAPLUS ABB=ON	PLU=ON	L8 AND CATIONIC
L10	1	SEA FILE=CAPLUS ABB=ON	PLU=ON	L9 AND DIMERIC

=> d bib abs

```
ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN
L10
       2004:801976 CAPLUS
AN
DN
       141:315835
       Cationic dimeric dyes having aminoazomethine or azo
TI
       groups
IN
       Eliu, Victor Paul; Frohling, Beate
PΑ
       Germany
SO
       U.S. Pat. Appl. Publ., 48 pp.
       CODEN: USXXCO
\mathbf{DT}
       Patent
LA
       English
FAN.CNT 1
       PATENT NO.
                               KIND
                                        DATE
                                                       APPLICATION NO.
                                                                                    DATE
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                                                                                    -----
ΡI
       US 2004187231
                                                       US 2004-801892
                                A1
                                        20040930
                                                                                    20040316
      AU 2004222107
                                A1
                                        20040930
                                                       AU 2004-222107
                                                                                    20040308
      WO 2004083312
                                A2
                                        20040930
                                                       WO 2004-EP50268
           W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
                CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
                LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
           NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
                BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
                ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,
                TD, TG
      EP 1622686
                                A2
                                        20060208
                                                      EP 2004-718316
                                                                                   20040308
           R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
                IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK
      CN 1761448
                                Α
                                        20060419
                                                       CN 2004-80007278
                                                                                   20040308
PRAI EP 2003-405185
                                Α
                                        20030318
      WO 2004-EP50268
                                Α
                                        20040308
      MARPAT 141:315835
GI
                                                    II
                                N --- N
                                     \mathbb{R}^2
                           X-
                    \mathbb{R}^2
         02 =
                               x-
```

AB The present invention relates to cationic dyes I and II, wherein A is Q1 or Q2, wherein R1 and R2 are each independently of the other

10/801,892 Page 20

unsubstituted or substituted C1-C14 alkyl or an aryl radical, R3 is hydrogen, unsubstituted or substituted C1-C14 alkyl, unsubstituted or substituted C1-C14 alkoxy, cyano or halo, R4 is hydrogen, unsubstituted or substituted C1-C14 alkyl or an aryl radical, and X- is an anion. Further, the present invention relates to compns. thereof, especially comprising other dyes, to processes for the preparation thereof and to the use thereof in the dyeing of organic material, such as paper and human hair with shades that are fast to washing, light, shampooing, and rubbing. A typical dye was manufactured by adding 16.5 g 4-pyridinealdehyde in 15 min to H2SO4 14, water 42, and α -methylphenylhydrazine 16.2 at 293K with stirring, stirring 1 h, adjusting the pH to 2.2 with aqueous NaOH, adding 2.7 g NaCl at 333K, stirring 1 h, dissolving the 39.3 g resulting hydrazone in 200 g iso-PrOH, adding 27 g 4,4'-bis(chloromethyl)biphenyl, heating to 338K, and stirring 5 h.

=> d his full

(FILE 'HOME' ENTERED AT 13:21:31 ON 10 JUN 2006)

FILE 'REGISTRY' ENTERED AT 13:21:39 ON 10 JUN 2006 L1 STRUCTURE UPLOADED L2 STRUCTURE UPLOADED L3 1 SEA SSS SAM L1 OR L2 D SCAN L422 SEA SSS FUL L1 OR L2 FILE 'CAPLUS' ENTERED AT 13:22:54 ON 10 JUN 2006 L_5 3 SEA ABB=ON PLU=ON L4 D QUE L5 STAT D 1-3 BIB ABS HITSTR E ELIU VICTOR/AU L6 27 SEA ABB=ON PLU=ON ("ELIU VICTOR"/AU OR "ELIU VICTOR PAUL"/AU) E FROHLING BEATE/AU 1.7 4 SEA ABB=ON PLU=ON "FROHLING BEATE"/AU 28 SEA ABB=ON PLU=ON L6 OR L7
11 SEA ABB=ON PLU=ON L8 AND CATIONIC L8 L9

FILE HOME

L10

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 9 JUN 2006 HIGHEST RN 887342-06-5 DICTIONARY FILE UPDATES: 9 JUN 2006 HIGHEST RN 887342-06-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

1 SEA ABB=ON PLU=ON L9 AND DIMERIC

D QUE L10 STAT D BIB ABS

***************** * The CA roles and document type information have been removed from \star * the IDE default display format and the ED field has been added, * effective March 20, 2005. A new display format, IDERL, is now st available and contains the CA role and document type information. st

Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

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FILE CAPLUS

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